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BARNJUM
BAR BELL DRILL,

R. TAIT MCKENZIE, M.D.

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THE BARNJUM BARBELL DRILL.

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TRIANGLE PUBLISHING CO.
SPRINGFIELD, MASS.

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PREFACE.



THE value and place of the barbell as a piece of gymnastic apparatus it is not our purpose to discuss here.

The advantages or drawbacks of the set drill we will leave for others to debate about. Let it suffice that the want is felt for the best barbell drill. Our object is to give to the gymnastic world one that has filled this vacancy for a limited, though varied, constituency, that needs only a wider knowledge and permanent form to make it as popular and serviceable to others as it has been to the writer among those who have used it by precept and example in the work of physical training.

If a drill is good, it is worth the trouble of acquiring thoroughly, for, after many repetitions, a movement that at first demanded great concentration and mental effort, becomes automatic, and we obtain the maximum of muscular exercise at the minimum of nervous expenditure. This makes it especially valuable to the busy man or woman, who has but a short time daily for the

work so necessary to keep the system in a healthy and vigorous condition.

The advantages of a uniform drill in competitive work between colleges, clubs, and associations need only be mentioned to be evident, but in its choice we must find certain leading features peculiarly suited to the barbell.

This instrument is evidently designed for movements which require and therefore cultivate suppleness by twistings and flexions of the body. It also lends itself readily to the teaching of accuracy and precision, while agility and strength are not among the least of the results of its proper use.

To gain these ends, a series of movements must be varied in composition, each one involving many groups of muscles. Life is too short to take sixteen counts to turn the head eight times to each side, when in the same counts the arms and legs could be exercised as well.

Above all, the exercises should be beautiful and the poses graceful. It is just as easy to design beneficial



movements that will be at the same time graceful as it is to make them ungainly, and their popularity is certain to be more permanent, and their educational value greatly enhanced.

In teaching this or any other drill, a great deal of its usefulness will depend on the brightness and thoroughness of the teacher. Never be dull or allow slurring of the movements. Praise or blame where necessary. In class work promote to leaderships for good work. Lay great stress on thoroughness and correctness.

I once asked Mr. Alexander, the well known and greatly esteemed director of the Liverpool gymnasium, why it was that I saw a blind man presiding at the piano for all his classes. "Why," he said, "a man who is blind does not try to make the exercise fit the music. He does what he is told, and is glad to be

employed." Music is a great help ; in fact, is almost necessary, but it must be played as an accompaniment to fit the exercise. If you try to make the exercise fit the accompaniment, you will ruin both.

This drill goes to waltz time, varied from fast to slow with the special movement. The following is a list of the music used for it in the classes at the Barnjum gymnasium by Miss Barnjum :—

Cupid's Greeting (A. Hueian), Love's Rejoicing (Baker), La Tosca (Bogert), Thua (Holst), Love comes like a Summer Sigh (Spencer), Wang (Morse), Queen's Bouquet, Visions of Rest (Baker), Thine Alone (Meissler), Myosotis (Lowthian), Beauty's Daughters, Till We Meet Again, Gondolia, Hypatia, Love's Sigh, Swinging, Marguerite (Lowthian), Erminie (Jakobowski).



INTRODUCTION.

To Major Fred. S. Barnjum belongs the credit of composing and combining the following exercises. He used them continuously for nearly thirty years in classes for men, women, and children of both sexes and all ages. It is still the most popular exercise in the work carried on by his sister, Miss H. O. Barnjum. It is also used in the gymnastic classes of McGill University, and the Montreal Amateur Athletic Association.

The form and number of the illustrations have been chosen that each exercise may be read off like music by the figures alone. A poorly illustrated drill may be like a singed cat, "better than it looks," but people don't want any "singed cats," now that they can be avoided.

In choosing a barbell get one whose upper end will just come up to the chin when the other is on the floor. It might be even a little shorter.

The count may be in eight double counts, as we use it at McGill, or else in sixteen single counts, with the word "change" at No. 15, to give time to prepare for the next exercise.

The position of attention is assumed before beginning. Heels together, feet at a right angle, chest forward, hips back, arms straight down, dividing the barbell into three equal parts, chin to neck, and facing the front.

The lunges or charges are five in number: 1. Straight forward. 2. Diagonally forward. 3. Straight to the side. 4. Diagonally backward. 5. Straight backward (see diagram). All charges should be made to the full extent of the legs, the knee kept directly over the toes of the charging leg, the other leg straight, foot firm.

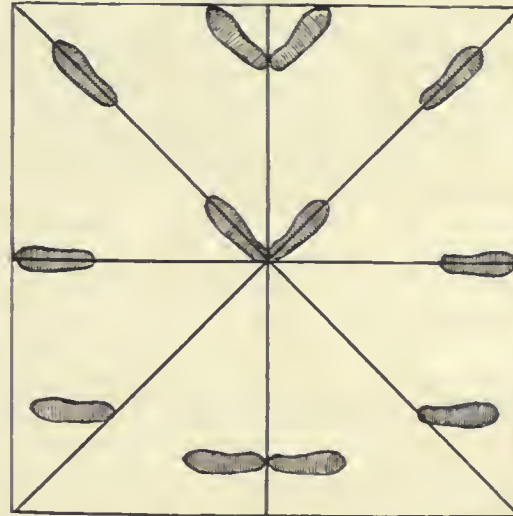


DIAGRAM OF CHARGES OR LUNGES, SHOWING POSITION OF FEET.





EXERCISE 1.

EXPLANATION.—Start from position of attention, barbell divided into three equal parts (see 2). In 1 curl the wrists, elbows above the barbell. In 3 and 6 diagonal front charge, straighten both arms, also the rear leg; barbell horizontal, knee of forward leg over the toes, head well up, chest expanded. Watch the “change” to prepare for the next movement.

MUSCLES USED.—Flexors of the forearm and hand, biceps, triceps, deltoid, trapezius, levator anguli scapulæ, serratus magnus, supra spinatus, latissimus dorsi, erector spinæ, extensors and external rotators of the thigh, muscles of the calf.





EXERCISE II.

EXPLANATION.—Swing to the left by moving the upper part of the trunk only, hips fixed, arms horizontal, and both rigidly straight, face to the front. Shoot the arms out vigorously after 3, 7, 11 and “change.” Don’t allow the feet to move. In this exercise the barbell is always horizontal and on a level with the shoulders. The side swings should be done slowly without jerking.

MUSCLES USED.—Sterno mastoid, deltoid, pectorals, biceps and triceps, flexors and extensors of the forearm, serratus magnus, trapezius, rhomboidei, latissimus dorsi, levator anguli scapulæ, supra and infra spinatus, internal and external abdominal oblique, transversalis. All the muscles of the lower extremities are used in resisting the attempted rotation of the pelvis.





EXERCISE III.

EXPLANATION.—After raising the barbell above the head full arm (1), bend back from the hips as far as possible (2). Then, knees extended, sweep down till both ends touch the floor simultaneously. Bring up to starting position, and then behind the head (5). Note the change from this to the next exercise.

MUSCLES USED.—Extensors of the arm, deltoid, latissimus dorsi, upper trapezius and serratus magnus, pectoralis major, extensors of the neck and back, ilio-psoas, extensors and flexors of the thigh, the hamstring muscles, strongly.





EXERCISE IV.

EXPLANATION.—In this forward diagonal charge, the barbell should be horizontal pointing from front to rear. Great care must be taken to keep the rear arm straight. The bending should be done by the lower back. Note the change.

MUSCLES USED.—Sterno mastoid and scaleni, pectoralis major, deltoid, trapezius, rhomboidei, serratus magnus, triceps, abdominal oblique and rectus, quadratus lumborum, erector spinæ, intercostals, extensors of the thigh, gluteal muscles, muscles of the calf.





EXERCISE V.

EXPLANATION.—These charges are straight backward, knee over the toes; don't turn in the forward foot. Keep the barbell horizontal and level with the shoulders, rear arm straight. Note the change.

MUSCLES USED.—Sterno mastoids, and all the other neck muscles, pectoralis major and minor, serratus magnus, levator anguli scapulæ, deltoid, biceps, triceps, supinators, and flexors and extensors of the wrist and forearm. Oblique abdominal muscles, extensors, flexors, adductors, and external rotators of the thigh, tensor vaginæ femoris, external rotators of the knee, extensors of the foot, peronei.





EXERCISE VI.

EXPLANATION.--The hands are brought to the ends of the barbell at 2. and at 3 the body is bent to the side till the barbell is perpendicular. The bend should be from the hips. Don't let the upper arm approach the head. The bend should be slow and after a deep inspiration. Both legs straight and feet firm.

MUSCLES USED.--All the neck muscles, deltoid, extensors of the arm, trapezius, pectoralis major and minor, latissimus dorsi, abdominal oblique, and rectus, quadratus lumborum, intercostals, erector spinæ, gluteal muscles.





EXERCISE VII.

EXPLANATION.—In this diagonal front charge, the lower end of the barbell should prolong the point of the knee, so that if dropped it would just clear the ends of the toes. Both arms straight, keep the back straight. barbell perpendicular, each count well defined, and the movements distinct.

MUSCLES USED.—Extensors of the forearm and arm, sterno mastoid and trapezius, erector spinæ, deltoid, serratus magnus, rhomboidei, levator anguli scapulæ, oblique abdominal and quadratus lumborum, quadriceps extensor cruris, biceps cruris, and muscles of the calf.





EXERCISE VIII.

EXPLANATION.—Both arms straight, bring the barbell to the median line of the body perpendicularly behind. Don't move the body or head from side to side.

MUSCLES USED.—Sterno mastoid, trapezius, rhomboidei, deltoid, pectoralis major and minor, latissimus dorsi, subscapularis, teres major and minor, spinati, biceps and triceps. The muscles of each side act alternately, making this a valuable exercise for raising a low shoulder. If a right shoulder is to be elevated, raise the right arm and lower the left.





EXERCISE IX.

EXPLANATION.—Charge straight to the side, foot pointing to the side. look the way you charge. Forward arm straight, rear leg straight. Don't roll the rear foot.

MUSCLES USED.—Sterno mastoid, trapezius, latissimus dorsi, serratus magnus, pectoralis major and minor, rhomboidei, biceps, triceps, erector spinæ, quadriceps extensor, calf muscles, external rotators and adductors of the thigh.





EXERCISE X.

EXPLANATION.—Note the change to this exercise carefully, make each motion distinct, allow no slurring. The pause at 4 will allow time for an accurate long charge at 5. Make the knee touch the barbell each time, but keep the barbell steady. Keep the head up, forward arm straight, and let the bending be done above the hips.

MUSCLES USED.—Sterno mastoids and trapezius, deltoid, latissimus dorsi, intercostals, pectorals, teres and spinati, triceps, oblique abdominal and quadratus lumborum. All the muscles of the thigh and leg.





EXERCISE XI.

EXPLANATION.—Note the change to this exercise, don't slur the movements. In the change the lower end should be swept up by strongly pronating the forearm and bringing it to the belt; the other hand steadies it by grasping it farther up.

MUSCLES USED.—Same as in Exercise X., with the addition of the pronators of the forearm.





EXERCISE XII.

EXPLANATION.—Forward diagonal charge, head up, lower end kept at the belt, forward arm straight. Change the relative positions at the even counts, 2, 4, 6, etc., except 16.

MUSCLES USED.—Muscles of the neck and shoulder strongly, triceps, serratus magnus, pectorals, latissimus dorsi, erector spinæ and quadratus lumborum, extensors and flexors of the thigh and leg, also the abductors.





EXERCISE XIII.

EXPLANATION.—In this exercise, the two forward and the two backward diagonal charges alternate, the barbell always pointing in the opposite direction from the charge, otherwise the same as the preceding. Keep the eyes fixed on the upper head of the barbell in these charges. Note the change.

MUSCLES USED.—Same as in Exercise XII., with a stronger action of the external rotators and abductors of the thigh, and rotators of the neck.





EXERCISE XIV.

EXPLANATION.—Diagonal charge forward, barbell horizontal, pause at the end of each swing. Don't roll the hips, move from the hips upward only. Keep both arms straight, and don't raise the rear arm too high.

MUSCLES USED.—The abdominal, spinal, and ilio-psoas strongly. In fact it would be difficult to name a muscle that is not used in this exercise if properly done.





EXERCISE XV.

EXPLANATION.—The charge is straight back, head up and face to the front. The lower end of the barbell should be behind the knee. Don't roll the forward foot.

MUSCLES USED.—Trapezius, recti capitis, complexus, splenius capitis, levators of the arm, pectoralis major and minor strongly, latissimus dorsi, abdominal oblique, and rectus, erector spinæ, quadratus lumborum, flexors, extensors, abductors, and external rotators of the thigh and leg.





EXERCISE XVI.

EXPLANATION.—Bring the barbell to the back in two distinct motions separated by a pause. Both arms should be kept straight throughout, also the rear knee. Don't roll the rear foot, make a long charge, and bring the barbell to the perpendicular.

MUSCLES USED.—Trapezius and the other levators of the shoulder, erector spinæ, quadratus lumborum, intercostals, oblique abdominal muscles, flexors and extensors of the thigh and leg.





EXERCISE XVII.

EXPLANATION.—This exercise should be done slowly with a pause at the end of each twist ; both arms should be kept straight, face to the front, and hips firm, the rotation being confined to the trunk itself. Keep the barbell horizontal : at the change bring the hands toward the center of the barbell, till it is divided as in Exercise I.

MUSCLES USED.—All the levators of the arm and shoulder, rotators and extensors of the head, intercostals, latissimus dorsi, pectoralis major, abdominal oblique, and transversalis. quadratus lumborum, erector spinæ. All the muscles of the lower extremities resist the attempted rotation of the pelvis.





EXERCISE XVIII.

EXPLANATION.—Charge straight back, the rear arm raised and grasping the barbell at a third of its length from the end. Forward arm straight, fist clenched and jammed well back, keep the head up and body erect. Don't roll the forward foot. Note the change in position of the hands at the beginning and end of the exercise.

MUSCLES USED.—Levators of the arm and shoulder strongly, extensors of the head, erector spinæ, oblique abdominal muscles, latissimus dorsi, extensors, flexors and rotators of the thigh and leg.





EXERCISE XIX.

EXPLANATION.—Charge diagonally back, both arms straight, lower end of the barbell prolonging the point of the knee. Face the front, head up, forward leg straight.

MUSCLES USED.—Deltoid, trapezius, and all the neck muscles, triceps, muscles of the abdomen and intercostals strongly, ilio-psoas, extensors and flexors of the thigh, all the leg muscles.





EXERCISE XX.

EXPLANATION.—This exercise shows the cross diagonal charge. Go well across and forward without raising the heel of the rear foot, barbell brought to the perpendicular over the forward foot, both arms straight.

MUSCLES USED.—Pectorals, latissimus dorsi, trapezius, adductors and external rotators of the thigh strongly, sartorius and peronei strongly.





EXERCISE XXI.

EXPLANATION.—Charge straight back, both arms straight, barbell horizontal, pointing from front to rear. Don't roll the forward foot or turn in the toes.

MUSCLES USED.—Levators of the scapulæ and arms, triceps, trapezius, pectoralis major, sterno mastoids, and extensors of the head, abdominal and spinal muscles, especially the quadratus lumborum, external rotators, extensors and flexors of the thigh and leg, the peronei muscles strongly.





EXERCISE XXII.

EXPLANATION.—Take long charges with the body upright. This exercise may be varied by springing at 3, making a left turn in the air, at 7 spring and make a left about turn, at 13 make a left turn, thus completing the circle. At 16 the barbell may be brought perpendicularly to the side ready for marching.

MUSCLES USED.—All the muscles about the shoulder joint, the erector spinæ, extensors of the head, all the muscles of the thighs and legs.



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